Dear Mayor Silverthorne and Members of City Council:

As the city experiences new development and redevelopment, and faces expanding regulatory requirements during challenging economic times, it is more important than ever to identify opportunities to promote environmentally sustainable economic development. The Environmental Sustainability Committee (ESC) serves in an advisory role to the City Council and all Boards and Commissions on environmental and energy conservation issues. One of the ESC's core functions is to act as an advocate for protecting, preserving and enhancing the environment as it relates to issues under consideration by the City Council and Planning Commission. To that end, the committee respectfully submits the following comments on the Layton Hall Redevelopment Proposal.

The ESC encourages energy efficiency in the built environment. Buildings represent the single largest consumer of electricity in our country. Even without a proffer, the applicant is required to meet the 2009 International Energy Conservation Code. However, the 2012 IECC is available and enforceable. Adherence to the 2012 Code would reduce the energy use by the development and show a true commitment to sustainable design. As an alternative to the 2012 Energy code the applicant could seek LEED certification. Even at the lowest level LEED certification is an accepted industry standard and will ensure greater energy efficiency and reduced environmental impact.

The ESC studied the proposed plans at its May 6 meeting and has significant concerns about the impact of the project on the Accotink Creek. The Accotink Creek stream corridor is one of the most sensitive environmental areas of our city and is designated as a Resource Protection Area (RPA) under the Chesapeake Bay Preservation Ordinance as set forth by the Commonwealth of Virginia.

The proposed project is located on a parcel immediately adjacent to Accotink Creek, which has already been identified by Virginia Department of Environmental Quality and the EPA as having an impaired biological community for which a total maximum daily load (TMDL) regulation is forthcoming. The ESC strongly recommends that the city take an environmentally sensitive approach to the redevelopment of this property in order to minimize the impacts of the project on the stream and its aquatic life, as well as to avoid exacerbating downstream erosion and flooding problems. The attached review of the impacts on Accotink Creek provides more detail and identifies the following recommendations to help minimize those impacts:

- Retain more existing trees and increase the square footage of soil area for new tree planting areas to provide sufficient area for trees to attain mature growth. preferably group trees together and provide layers of understory, shrub and groundcover to maximize ecosystem value
- filling and grading are prohibited in the RPA and should be minimized on the site as a whole,
- Prohibit further encroachment in the RPA as required by the Chesapeake Bay Preservation Ordinance- do not allow retaining walls and additional paved areas and do not widen the existing path unless path is replaced with an eco-friendly, pervious material

- impervious areas are reduced to no more than the maximum allowed in the district and the city is provided a certified drawing showing the materials, location and square footage of impervious area prior to site plan approval, and

- stormwater management measures are dispersed uniformly throughout the site's landscape and a variety of detention, retention, and runoff practices are used.

Prior to approval of any special exceptions or rezonings, the ESC recommends that the City Council:

- work with the applicant to address impacts from the removal and disruption of habitat on the property and in the adjacent parkland through restoration and improvement directed at reducing invasives, restoring native understory and shrub growth, and providing habitat in the RPA and adjacent woodlands;

- request a 3D computer modeling of the proposed development for public review to better convey the proposal's scale, size and siting with regard to the surrounding properties;

- request a graphic delineation of impervious area calculations;

- request that the developer provide an independent flood model of the post construction stream channel or make approval contingent upon satisfactory evidence of no impact to the properties along University Drive, and downstream;

- contact the homeowners along Accotink Creek (on University Drive, Jean Street, and Spring Lake Terrace) to insure that property owners along the adjacent and downstream sections of Accotink Creek are made aware of the project and their concerns addressed.

The ESC is supportive of development that promotes the smart growth goals of creating livable and healthy communities that have a low impact on the natural environment. Done right, smart growth will help connect people to the natural world around them. Unfortunately, several aspects of this project work against these goals. The project is inwardly focused, in effect walled off from the stream and park by substantial (up to 14 feet high at one point) retaining walls. It is all too likely that this project will result in a significant increase in motor vehicle traffic as residents travel to work elsewhere. Currently even access to the local supermarket is a veritable labyrinth for pedestrians. The target market for the rental units appears to be young professionals, and because of the limited retail, office and entertainment venues in the city, these renters are likely to travel outside of the city for many of these needs. The expanse of paving to park those cars is a major impediment to the environmental sustainability of the project.

The ESC recommends that the applicant work with City Council to improve the existing public transit system and to provide usable trail and walk connections for both the future inhabitants as well as others in the city. Without aggressive efforts to improve public transit, walkability and biking access, this project will exacerbate already congested traffic conditions, especially in the morning hours along Layton Hall Drive, Old Lee Highway, University Drive and Chain Bridge Road.

The ESC hopes that these comments will assist the City Council in their review and consideration of the Layton Hall Redevelopment Proposal. We would appreciate the opportunity to discuss our concerns in more detail.

Sincerely,

Judy Fraser
ESC Chair on behalf of the Environmental Sustainability Committee

Environmental Sustainability Committee (ESC) Review of the Layton Hall Redevelopment Proposal Regarding Impacts to Accotink Creek

The Accotink Creek stream corridor is one of the most sensitive environmental areas of our city and is designated as a resource protection area (RPA) under the City's Chesapeake Bay Preservation Ordinance. The property for which the special exceptions for development are being asked is immediately adjacent to Accotink Creek and includes the Resource Protection Area for the creek. The City of Fairfax takes great pride in its streams and has worked hard and spent a great deal of money in restoring sections of the Accotink Creek. To approve development activity that will worsen the Accotink Creek's status is in conflict with the city's demonstrated commitment to restore and protect the Accotink Creek. The ESC strongly recommends that the city take an environmentally sensitive approach to the redevelopment of this property in order to minimize the impacts of the project on the stream and its aquatic life, as well as to avoid exacerbating downstream erosion and flooding problems. While development or renovation of this property is in the city's near-term economic interest, it is not clear that the project described in the Staff Memo dated April 22, 2013, is in the long term interests of the city due to its impact on one of the city's most sensitive and valued natural resources, the Accotink Creek stream corridor. The following summary describes the basic principles of Low Impact Development and the most significant potential impacts of the project as proposed.

Low Impact Development

Low Impact Development (LID) is a comprehensive land planning and engineering design approach with a goal of maintaining and enhancing the pre-development hydrologic regime of urban and developing watersheds. The principles of LID include:

- Minimizing stormwater impacts to the extent practicable. Techniques include reducing imperviousness, conserving natural resources and ecosystems, maintaining natural drainage courses, reducing use of pipes, and minimizing clearing and grading.
- Providing runoff storage measures dispersed uniformly throughout a site's landscape with the use of a variety of detention, retention, and runoff practices.
- Maintaining predevelopment time of concentration by strategically routing flows to maintain travel time and control the discharge.

The ESC recommends using LID methods rather than relying completely on built stormwater management structures. This begins by minimizing impacts to the existing site, including tree removal, grading, encroachment into the RPA and impervious cover. Stormwater management practices can then be used to treat the remaining unavoidable impacts.

Tree Removal

Trees provide multiple environmental benefits including carbon storage, improved air quality and building energy savings. Trees also provide significant stormwater management benefits by:

- intercepting and holding rain on leaves, branches and bark,
- increasing infiltration and storage of rainwater through the tree's root system, and
- reducing soil erosion by slowing rainfall before it strikes the soil.

Under existing conditions, 119,295 square feet (35 percent of the total area) of the site is covered by mature tree canopy. The proposed plan removes almost all of these mature trees and replaces them with smaller trees. The post-development tree cover is only 51,030 square feet (15 percent of the total site area), and , given the proposed site conditions, which include very little pervious or vegetated area, there is little to support development of mature, healthy large trees or tree canopy.

Grading and Filling

The proposed plan shows the limits of grading covering the entire site, including well into the RPA. This approach would have dramatic and irreversible environmental impacts, including but not limited to:

- removal of existing established vegetation and mature trees,
- elimination of plant and wildlife habitat,
- removal of healthy soil attributes (top soil, existing soil micro organisms), and
- compacting of soil resulting in reduced infiltration capacity in any remaining pervious areas.

The Chesapeake Bay Preservation Ordinance specifically stipulates that grading and filling should be minimized to the extent possible. Allowing the limits of clearing and grading to extend across the entire stream protection area is against the purpose and intent of the Ordinance. The plan's extensive grading and fill operations in the RPA will also directly impact the stream during construction, even with fully functioning erosion and sediment controls in place. Given the extensive nature of the proposed regrading and its proximity to the stream, any failure of the erosion and sediment controls could result in significant stream damage.

RPA Encroachment

Under the city's Chesapeake Bay Preservation Ordinance, Resource Protection Areas (RPAs) are designated as lands adjacent to water bodies with perennial flow that have an intrinsic water quality value or are sensitive to impacts which may result in significant degradation to the quality of state waters (110-4 of the City of Fairfax Code of Ordinances.)

The staff memo gives the impression that the parking area in the RPA exists and part of it will be allowed to remain. But the current plan proposes locating additional parking and new retaining walls in the RPA, both of which represent significant and new impacts on the stream. Additional paving and disturbance in the RPA are specifically prohibited by the zoning ordinance, and exceptions are narrowly defined and in view of the committee not met by this application [Sec. 110-89 (d)]

- The retaining walls would effectively be the limit of the RPA, and thus severely compromisethe intended function of the RPA buffer which is to filter and slow down water as it approaches the stream and provide riparian buffer functions for the stream. Whether pervious or not, any

section of the RPA on the landward side of the retaining walls will no longer function as intended.

- The height and location of the walls and buildings will also worsen the microclimate of vegetation in the RPA because a portion of the area will be shaded by the structures, sun and wind may be amplified by the walls, and natural ground water flow is interrupted by the grading and walls.
- The banks and riparian edges of streams are part of the stream ecosystem. Without even the protection provided by the establishment of the minimum RPA, streams have little chance of maintaining their structural, flow, habitat and biological functions.
- As per the City's 2007 stream assessment report "stream bank erosion is a major impact on the stability and overall health of the City's streams".

Even if the proposed encroachment into the RPA is deemed unavoidable, the ordinance requires mitigation of that impact on site. The current proposed site plan indicates that there will be 13,500 square feet of paving in the RPA. According to 110-84-d(2)b, "a vegetated area shall be established elsewhere on the lot or parcel in a manner that will maximize water quality protection, mitigate the effects of the buffer encroachment and is equal to the area of encroachment into the buffer area." In this case this means 13,500 square feet of vegetated buffer area is required elsewhere on the site.

Floodplain

Questions remain about the impact of the proposed plan on the floodplain. The removal of buildings from the floodplain is good for both the property owner and the city. However, building what will act as a de facto flood wall along the south side of the stream virtually insures that any expansion of the floodplain will have to occur along the north side of the stream.. Any expansion of the floodplain to the north would put the existing single family homes along University Drive in greater jeopardy. Future flooding problems for these residents will be costly for both the homeowners as well as the city.

Stormwater and Impervious Area

Currently the site is approximately 5.5 acres of pervious surface, which includes a variety of woodland and turf areas. All stormwater management structures require maintenance in order to perform properly and it falls on the city to ensure that that these structures are properly designed, installed and maintained. Minimizing the impervious surface of any proposed development is one of the best and most easily maintained methods of reducing stormwater runoff and its associated costs. Taking an LID approach to the design and construction of this site would help minimize the resulting increase in stormwater runoff and help protect our streams and their ecosystems, as well as other properties adjacent to Accotink Creek. A graphic calculation of the post-construction impervious area should be provided and confirmed accurate by staff.

The cumulative impacts of tree removal, grading, encroachment into the RPA and increased impervious area shown in the proposed development plan will increase stormwater runoff from the site dramatically. Currently stormwater is intercepted by the mature tree canopy, the vegetated buffers or

infiltrated into the ground on the property. The remaining flow is conveyed overland to the stream along the full length of the property which also lessens the impact of the runoff on the stream. As proposed, the stormwater runoff from the entire site would be captured and released at two outfalls into the RPA. The site also impacts off-site runoff from the properties above Layton Hall Apartments which is currently dissipated in a vegetated swale along the edge of the property. Downstream properties already suffer from erosion and flooding and this additional water, even when released at a controlled rate, has the potential to aggravate the existing erosion and flooding problems of many city residents.

The impacts of developing this site as proposed would be severe given the sensitive location and the current beneficial attributes of the property. The size of this property should allow sufficient flexibility to minimize environmental impacts while maintaining an economically viable business plan. Negative stormwater impacts of the proposed project will ultimately become the responsibility of the city and its taxpayers under current and upcoming stormwater regulatory requirements.

The biological function of the Accotink Creek has already been specifically called out by the Virginia Department of Environmental Quality and the EPA as impaired. Regulations (a Total Maximum Daily Load) to address this biological impairment are forthcoming. The Chesapeake Bay TMDL established in 2010 requires localities to reduce the amount of nitrogen, phosphorus and sediment being discharged with their stormwater. This means that not only must existing discharges be reduced, but any new discharges will have to be offset. These requirements will be enforced through the city's new Municipal Separate Storm Sewer System (MS4) permit, which will go into effect in July 2013.

Recommendations

The ESC recommends that City Council and staff ensure that, at a minimum, the following points are addressed and agreed to by the developer in order to protect Accotink Creek from further damage as a result of development on the Layton Hall site:

- Retain more existing trees and increase the square footage of soil area for new tree planting areas to provide sufficient area for trees to attain mature growth. preferably group trees together and provide layers of understory, shrub and groundcover to maximize ecosystem value
- filling and grading are prohibited in the RPA and should be minimized on the site as a whole,
- prohibit further encroachment in the RPA as required by the Chesapeake Bay Preservation Ordinance- do not allow retaining walls and additional paved areas and do not widen the existing path unless path is replaced with an eco-friendly, pervious material, reduce turf areas in the RPA by planting native understory, shrub and groundcover layers.
- impervious areas are reduced to no more than the maximum allowed in the district and the city is provided a certified drawing showing the materials, location and square footage of impervious area prior to site plan approval, and
- stormwater management measures are dispersed uniformly throughout the site's landscape and a variety of detention, retention, and runoff practices are used.

Prior to the public hearing on this project, and prior to approval of any special exceptions or rezonings, the ESC recommends that the City Council:

- request a graphic delineation of impervious area calculations
- work with the applicant to address impacts from the removal and disruption of habitat on the property and in the adjacent parkland through restoration and improvement directed at reducing invasives, restoring native understory and shrub growth, and providing habitat in the RPA and adjacent woodlands.
- request a 3D computer modeling of the proposed development for public review
- request that the developer provide an independent flood model of the post construction stream channel or make approval contingent upon satisfactory evidence of no impact to the properties along University Drive, and downstream.
- request a commitment from the applicant that the project will honor the purpose and intent in addition to the requirements of the Chesapeake Bay Preservation Ordinance
- contact the homeowners along Accotink Creek (on University Drive, Jean Street, and Spring Lake Terrace) to insure that property owners along the adjacent and downstream sections of Accotink Creek are made aware of the project and their concerns addressed.

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